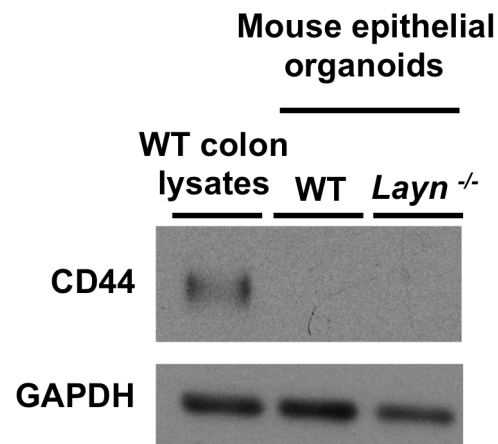


**Supplemental figure 1.** Lack of layilin mRNA expression was confirmed in *Layn*<sup>-/-</sup> mouse colon tissues and mouse intestinal epithelial organoids generated from *Layn*<sup>-/-</sup> mouse colon crypts. **A.** RNA was isolated from wild type and *Layn*<sup>-/-</sup> mouse colon tissues and cDNA was made from RNA. qRT-PCR was used to measure relative mRNA expression levels of *Layn* and normalized to 18S. **B.** RNA was isolated from 3 wells of wild type and *Layn*<sup>-/-</sup> mouse intestinal organoids. cDNA was used to measure mRNA expression levels of *Layn* by qRT-PCR and normalized to 18S.



**Supplemental Figure 2.** *Layn* knockout (*Layn*<sup>-/-</sup>) mouse colonic epithelial organoids do not express CD44. Western blot analysis of CD44 protein in mouse colon tissues collected from wild type (WT) mice, or in mouse colonic epithelial organoids generated from WT or *Layn*<sup>-/-</sup> mice. GAPDH was used as loading control.